

*ARISTO*

SLIDE RULES FOR SCHOOLS

# ARISTO

## SCHOOL SLIDE RULES

The ARISTO Scholar is the desire of every teacher — an ideal rule for school use. Whether the reverse of the rule is available for the working out of calculating principles, or whether it is provided with folded or Log-Log scales, the front face always shows the standard scale arrangement. In the intermediate grades all models can thus be used side by side — a very practical consideration for school-owned slide rules. For working groups or classes in senior schools the more sophisticated scales of the rule provide the basis for further instruction.

Where only a very simple scale pattern is required, the ARISTO Junior or the ARISTO Simplex will be found suitable.

Discriminating users, who demand log-log and folded scales, will select the ARISTO TriLog or, preferably, the ARISTO Studio.

All ARISTO school slide rules offer the following advantages:

- Simple and clear arrangement of scales, with large, easily read figures, permitting effortless reading without eye-fatigue
- Ideally smooth, non-jerking slide movement
- Manufactured in highly-elastic, break-resistant ARISTOPAL
- Unaffected by water and most chemicals
- Not affected by light, and colour-fast
- Non-inflammable

Day by day ARISTO student's slide rules demonstrate their superiority in teaching practice. Experienced teachers in all types of schools have cooperated in their design.

## ARISTO SLIDE RULES - SCALE CODE

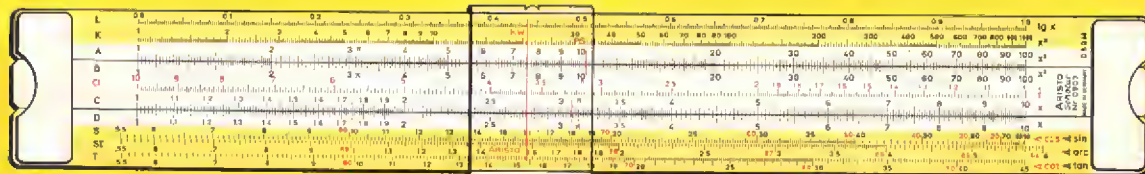
| Code Designation by letter | Code Designation by mathematical symbol | Scale  |
|----------------------------|---|--|
| A                          | $x^2$                                   | Scale of Squares on body                           |
| B                          | $x^2$                                   | Scale of Squares on slide                          |
| BI                         | $\frac{1}{x^2}$                         | Inverted (reciprocal)<br>Scale of Squares on slide |
| C                          | $x$                                     | Fundamental Scale on slide                         |
| CF                         | $\pi x$                                 | Folded Scale on slide                              |
| CI                         | $\frac{1}{x}$                           | Inverted (reciprocal)<br>Scale of C on slide       |
| CIF                        | $\frac{1}{\pi x}$                       | Inverted (reciprocal)<br>Folded Scale of CF        |
| D                          | $x$                                     | Fundamental Scale on body                          |
| DF                         | $\pi x$                                 | Folded Scale on body                               |
| K                          | $x^3$                                   | Scale of Cubes                                     |
| L                          | $\lg x$                                 | Mantissa Scale                                     |
| LL1                        | $e^{0,01x}$                             | Log Log Scale, range 1.01 to 1.11                  |
| LL2                        | $e^{0,1x}$                              | Log Log Scale, range 1.1 to 3.0                    |
| LL3                        | $e^x$                                   | Log Log Scale, range 2.5 to $10^5$                 |
| S                          | $\sin$ ( $\sin$ )                       | Scale of Sines and Cosines                         |
| ST                         | $\arcsin$                               | Scale of Small Angles in Radians                   |
| T                          | $\tan$ ( $\tan$ )                       | Scale of Tangents and Cotangents                   |

## ARISTO SCHOLAR

The »School Rietz« for Primary, Secondary, Grammar and Technical Schools

- 0903** Scale length 10 in. (25 cm)
- 3/100** Demonstration model, scale length 40 in. (100 cm)
- 3/150** Demonstration model, scale length 5 ft. (150 cm)

The ARISTO Scholar is sometimes known as the "School Rietz" since all the well known scales of the Rietz system are combined, together with the trigonometrical scales S, ST and T, on one face of the rule. This arrangement avoids the need to reverse the slide for trigonometrical calculations — the reading of values of functions requires only movement of the cursor. The trigonometrical scales



Front face 0903 · 0903 LL · 0903 VS · 0903 VS-2

Scales: L, K, A, B, C, D, S, ST, T  
Reverse face 0903: mm and inch scale

are decimally divided, so that scale ST (of small angles) can also be used to convert to and from circular measure into radian measure.

The fundamental scales C/D and the scales of squares A/B are positioned as usual. The scale of reciprocals B, figured in red to obviate errors in reading, serves not only to indicate reciprocal values, but also to save time in

multiplication and division involving several factors. The scale pattern is distinguished by the use of coloured strips, so that the scales most frequently used by beginners can be brought out clearly.

The cursor, of gloss-clear ARISTOPAL, carries index marks for the direct reading of circle-diameter  $\longleftrightarrow$  circular area and the conversion of kW  $\longleftrightarrow$  HP.

All ARISTO student's slide rules are supplied in the new indestructible ARISTOLEN case

## ARISTO SCHOLAR VS AND VS-2

The double face slide rule for secondary and grammar schools, with reversible single sided cursor (0903 VS) or double sided cursor (0903 VS-2).

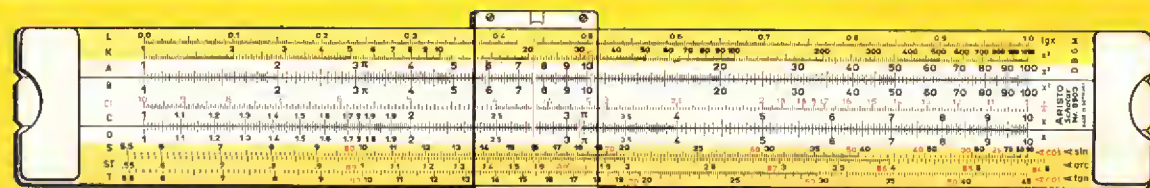
**0903 VS** Scale length 10 in. (25 cm)

**0903 VS-2** Scale length 10 in. (25 cm)

**3 VS/150** Demonstration model,  
scale length 5ft. (150 cm)

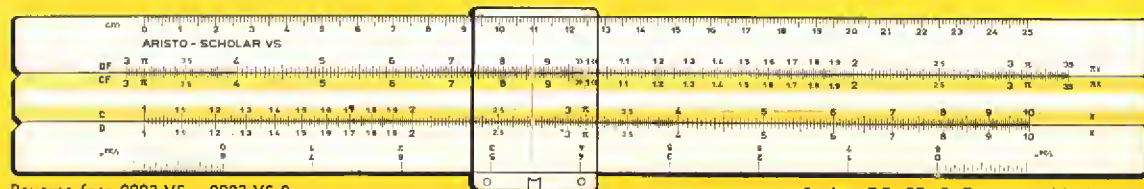
Whilst one rule face is identical with that of the ARISTO Scholar 0903, the other face carries folded scales DF/CF, arranged in conjunction with fundamental scales C/D.

The special advantage of this rule is that the student may calculate with the fundamental scales only, avoiding the confusion of a plurality of scales. In addition, the student



Front face 0903 VS · 0903 VS-2

Scales: L, K, A, B, CI, C, D, S, ST, T



Reverse face 0903 VS · 0903 VS-2

Scales: DF, CF, C, D, mm and inch scale

becomes familiar, in school, with a scale system that is the foundation of every technical and commercial slide rule.

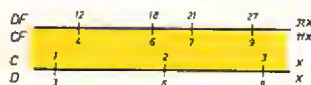
The particular advantages of reciprocal scales stem from the avoidance, by their use, of tedious traversing of the slide. In proportioning and tabulating all ratios or factors

can be set up with a single setting of the slide whilst, in addition, calculations involving  $\pi$  are simplified.

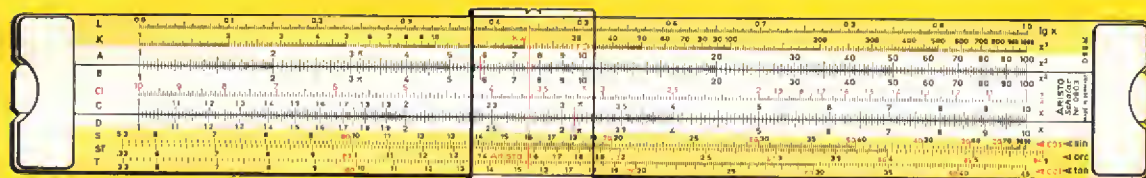
An example, using simple figures, should make these advantages clear. With one setting of the slide one can determine:



- 1 Multiplication:  $3 \cdot 3 = 9$ ;  $3 \cdot 6 = 18$ ; etc.
- 2 Tabulating:  $y = 3x$
- 3 Proportion:  $\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12} = \frac{6}{18} = \dots$

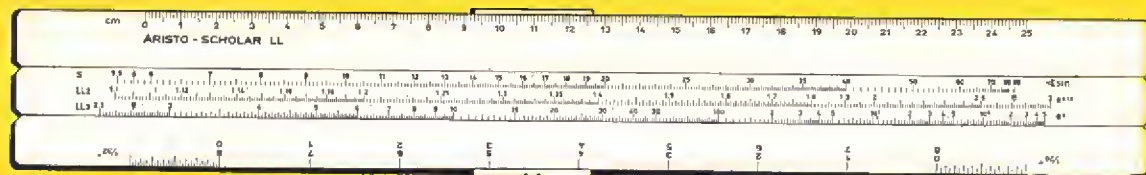


The cursor of the ARISTO Scholar VS must be removed when changing from one side of the rule to the other. The ARISTO Scholar VS-2 is provided with a double sided cursor, on which the index marks are aligned with reference to one another, to permit transfer of working from one face of the rule to the other. The cursor carries on its front face the same index marks as does the single sided cursor. On the reverse face, near to the principal index line, is a mark for calculations involving the factor 36. With the aid of this mark, commercial problems of interest are simplified, as they normally are with specialised commercial slide rules.



Front face 0903 LL

Scales: L, K, A, B, C, D, S, ST, T



Reverse face 0903 LL

Scales: S, LL<sub>1</sub>, LL<sub>2</sub>, mm and inch scale

## ARISTO SCHOLAR LL

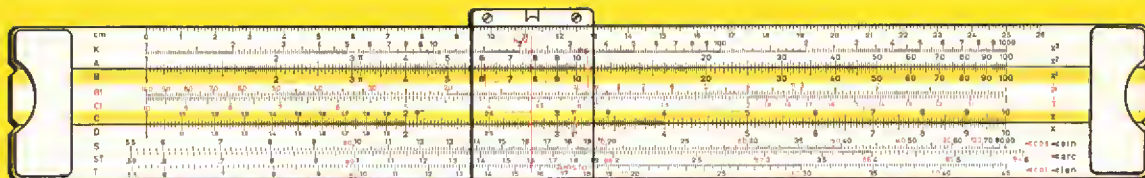
The »Schaal Darmstadt« for Grammar and Secondary schools and for Technical Institutes.

**0903 LL** Scale length 10 in. (25 cm)

**3 LL/150** Demonstration model,  
scale length 5 ft. (150 cm)

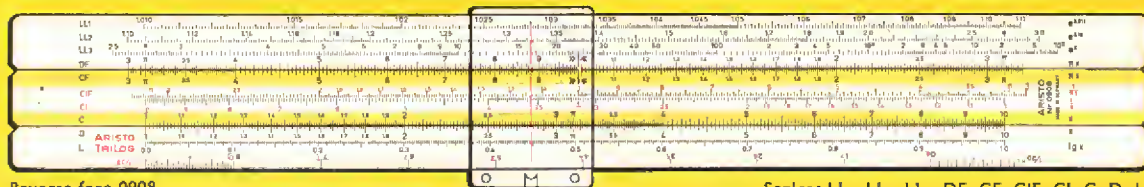
The front face of this Log-Log slide rule is identical with that of the ARISTO Scholar 0903.

The two part Log-Log scale on the reverse of the slide permits, within the range 1.1 to 50,000, the calculation of required powers, roots and logarithms. A second, movable, scale of sines simplifies the solution of problems involving trigonometrical functions, arising in the teaching of mathematics and physics.



Front face 0908

Scales: K, A, B, Bl, Cl, C, D, S, ST, T



Reverse face 0908

Scales: LL1, LL2, LL3, DF, CF, Cl, C, D, L

## ARISTO TRILOG

The double face slide rule for Grammar Schools, Trade and Secondary Schools and Technical Institutes, as well as for professional use where a versatile technical slide rule is required.

**0908** Scale length 10 in. (25 cm)

**8/150** Demonstration model,  
scale length 5 ft. (150 cm)

The ARISTO TriLog is, with its TRigonometrical and LOG-Log scales, at once a most desirable, comprehensive, schaal rule and an inexpensive rule for professional use. The well proven scale pattern of the ARISTO Scholar is

adopted for the ARISTO TriLog, with the addition of a reciprocal scale of squares, Bl, which saves time in work with the scales of squares, A/B.

The folded scales, incorporating a further scale ClF, and the three Lag-Lag scales, combine the advantages of the ARISTO Scholar VS and the ARISTO Scholar LL, in one and the same slide rule.

The removable double sided cursor, the index lines of which are matched to both sides of the rule, has auxiliary marks for the calculation of circular areas, for the conversion kW  $\longleftrightarrow$  HP and for the factor 36.

## ARISTO JUNIOR

The new Student's slide rule for Primary and Secondary schools, with folded scales.

**0901** Scale length 10 in. (25 cm)

**1/150** Demonstration model,  
scale length 5 ft. (150 cm)

The clearly arranged and deliberately simplified scale arrangement combines the fundamental scales, folded scales and the associated reciprocal scales into a unified scale system that is common to all modern slide rules.

The working of straightforward subject matter is, initially, concentrated upon this scale group, because this rule of three sums, percentages, tabulations and proportions can be calculated, from the beginning, without setting of the slide.

A scale of squares, A, makes possible the reading of squares and square roots. The cursor bears an index mark for the direct reading of circle-diameter  $\longleftrightarrow$  circle area and also a mark for the factor 36.

## ARISTO SIMPLEX

**0911** Scale length 10 in. (25 cm)

**11/150** Demonstration model,  
scale length 5 ft. (150 cm)

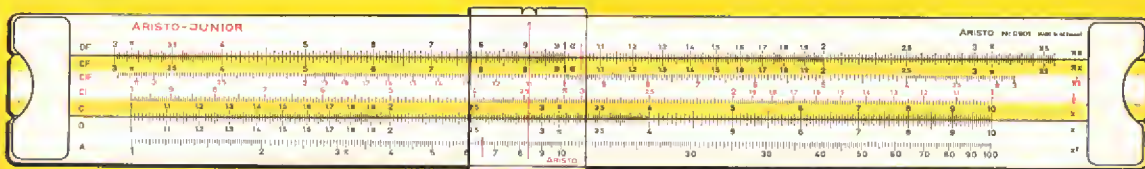
Dispensing with the folding scales, this model is intended for those who, whilst needing a movable scale of squares, require only the fundamental scales and the scales of squares.

## ARISTO

### Bulletins for Teachers of Mathematics and Science

This informal series of house magazine will be sent free of charge. Teachers interested therein are invited to write direct to:

DENNERT & PAPE · ARISTO-WERKE  
2 Hamburg-Altona 1, P. O. Box 380, Germany



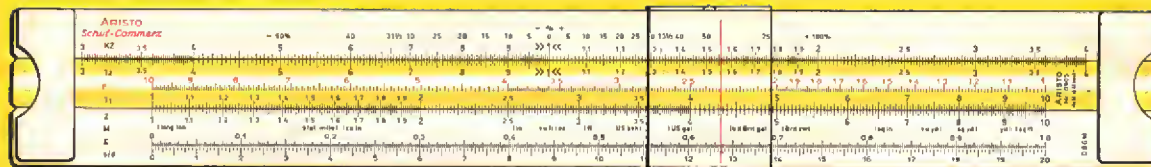
Front face 0901

Scales: DF, CF, CIF, CI, C, D, A



Front face 0911

Scales: A, B, C, D, mm and inch scale



Front face 0905

Scales: KZ, T<sub>2</sub>, P, T<sub>1</sub>, Z, M, £, s/d • Reverse face: mm and inch scale

## ARISTO SCHOOL COMMERCE

The slide rule for Trade and Commercial Schools.

**0905** Scale length 10 in. (25 cm)

**5/150** Demonstration model,  
scale length 5 ft. (150 cm)

This student's slide rule has fundamental scales, folded scales and a reciprocal and percentage scale for multiplication, division, percentages, interest and exchange rate calculations. Special scales for conversion from shillings and pence to £'s are also provided. Index lines simplify the conversion of English measures and weights into, and from, the metric system.

## ARISTO DEMONSTRATION SLIDE RULES

Thanks to the great scale length and to the clear figuring and lettering the scales of the ARISTO demonstration slide rules are easily discernible from every seat, even in large classrooms.

For regulation of the slide movement the ledges of the body are adjustable. In transit, the slide is fixed by a pin, which at the same time prevents the cursar from slipping off. Special hooks are furnished for hanging the rule on the blackboard or wall.

With the new, larger haak R, which must be specially ordered, the single sided rules can be suspended so that the plain side (without scales), faces the class. With a grease pencil linear scales can be plotted to illustrate graphical addition and subtraction during primary instruction or to explain the construction of multiplying rules.

## TEXTBOOKS FOR SLIDE RULE CALCULATION

- Stender: The Modern Slide Rule
- Baldermann: Methodische Hinweise für die Einführung des Stabrechnens in der Volksschule
- Baldermann: Wir rechnen mit dem Rechenstab
- Sternel-Prey: Der Rechenstab in der Hand des Kaufmanns
- Schäpke: Die Anwendung des kaufmännischen Rechenstabes

As improvements are made from time to time, we reserve the right to make alterations

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